

10/585021

LAP20 Rec'd STPTO 28 JUN 2006

APPENDIX B

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/GB2004/050047

International filing date (day/month/year)
24.12.2004

Priority date (day/month/year)
31.12.2003

International Patent Classification (IPC) or both national classification and IPC
A61K9/16

Applicant
VECTURA LTD.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☒ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GB2004/050047

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Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
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Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of:

- ☐ the entire international application,
- ☒ claims Nos. 7,23-26,30-32,37-39,46-55

because:

- ☒ the said international application, or the said claims Nos. 46,52-55 relate to the following subject matter which does not require an international preliminary examination (*specify*):

see separate sheet

- ☐ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☒ no international search report has been established for the whole application or for said claims Nos. 7,23-26,30-32,37-39,47-51
- ☐ the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:
 - the written form ☐ has not been furnished
 - ☐ does not comply with the standard
 - the computer readable form ☐ has not been furnished
 - ☐ does not comply with the standard
- ☐ the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions.
- ☐ See separate sheet for further details

**WRITTEN OPINION OF THE
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Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees, the applicant has:
- ☐ paid additional fees.
 - ☐ paid additional fees under protest.
 - ☒ not paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
- ☐ complied with
 - ☒ not complied with for the following reasons:
see separate sheet
4. Consequently, this report has been established in respect of the following parts of the international application:
- ☐ all parts.
 - ☒ the parts relating to claims Nos. 1-6,8-22,27-29,33-36,40-46,52-55

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	
	No: Claims	1-6,8-22,27-29,33-36,40-46,52-55
Inventive step (IS)	Yes: Claims	
	No: Claims	1-6,8-22,27-29,33-36,40-46,52-55
Industrial applicability (IA)	Yes: Claims	1-6,8-22,27-29,33-36,40-45
	No: Claims	

2. Citations and explanations

see separate sheet

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/GB2004/050047

Re Item I**Basis of the report**

Claims 1, 27, 40, 41 and 43 relate to products defined by reference to a desirable property.

The claims cover all products having the defined properties, whereas the application provides support within the meaning of Article 6 PCT and disclosure within the meaning of Article 5 PCT for only a very limited number of such products. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Independent of the above reasoning, claims 1, 27, 40, 41 and 43 also lack clarity (Article 6 PCT), because an attempt is made to define the products by reference to a result to be achieved, which merely amounts to a statement of the underlying problem, without providing the technical features necessary for achieving this result. Moreover, the claimed functional statements do not enable the skilled person to determine which technical features are necessary to perform the stated functions. Again, this lack of clarity is such as to render a meaningful search over the whole of the claimed scope impossible.

Claims 1-6, 8-22, 27-29, 33-36, 40-46 and 52-55 relate to an extremely large number of possible products. Support within the meaning of Article 6 PCT and/or disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small proportion of the products claimed. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible.

Consequently, the search has been carried out for those parts of the claims which appear to be clear, supported and disclosed, namely those parts relating to a fast melt multiparticulate formulation for oral administration comprising melt-coated core particles, said cores comprising an active agent which has an unpleasant taste and said melt-coating having taste-masking properties.

Re Item III**Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

Claims 46 and 52-55 relate to subject-matter considered by this Authority to be covered by the provisions of Rule 67.1(iv) PCT. Consequently, no opinion will be formulated with respect to the industrial applicability of the subject-matter of this claim (Article 34(4)(a)(I) PCT).

Re Item IV

Lack of unity of invention

The present set of claims comprises 5 inventions which are not so linked as to form a single general inventive concept, because the groups of claims do not have common or corresponding special technical features making a possible contribution over the state of the art:

1. Claims 1-6, 8-22, 27-29, 33-36, 40-46, 52-55: multiparticulate formulation with improved taste masking properties obtained by melt-coating (melt-granulating) core particles with a coating material
2. Claim 7: improved melt-coating process by controlling the particle size of the coating material and of the cores to be coated
3. Claims 23-26: multiparticulate formulation with improved taste masking properties obtained by precoating core particles
4. Claims 30-32, 37-39: multiparticulate formulation with improved taste masking properties obtained by addition of specific excipients
5. Claims 47-51: drug delivery device for delivery of metered dose units into the oral cavity of a subject

The only common subject-matter between inventions 1-5 is the plurality of taste masked particles comprising a core and a coating. This subject-matter, however, is not novel, since disclosed e.g. in US 4,146,653 and US 2003/0175355. Accordingly, no common or corresponding special technical feature can be found between the above mentioned groups of claims.

Furthermore, the groups of claims relating to inventions 1, 3 and 4 concern different technical solutions to the problem of taste masking of drugs having unpleasant taste. Invention 2 concerns a different technical solution to a more general problem, being the improvement of the melt-coating process as such.

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following document/s/:

- D1: US 2003/175355 A1 (TOBYN MICHAEL JOHN ET AL) 18 September 2003
- D2: WO 00/61119 A (PHARMAPLUS S.R.L; VALENTI, F) 19 October 2000
- D3: DATABASE WPI Section Ch, Week 199418 Derwent Publications Ltd., London, GB; Class B07, AN 1994-147117 XP002331011 & JP 06 091150 A (DAIICHI PHARM CO LTD) 5 April 1994
- D4: US-A-4 146 653 (MADER ET AL) 27 March 1979
- D5: US-A-4 948 622 (KOKUBO ET AL) 14 August 1990

The subject-matter of independent claims 1, 44, 45, 46 and 52 is not novel (Art. 33(2) PCT) in view of prior art disclosures which can be taken from D1-D5. Said prior art documents (cf. passages cited in the ISR) disclose compositions, methods and uses which fall within the definition of the above mentioned claims.

Also the dependent claims 2-6, 8-22, 27-29, 40-43 and 53-55 do not appear to contain any additional features which, in combination with the features of any claim to which they refer, would render the claimed subject-matter novel and inventive (Art.33(2)-(3) PCT). The specific embodiments are disclosed or at least suggested by the state of the art disclosed in D1-D5 (cf. passages cited in the ISR). D1 is considered particularly relevant, since it discloses identical fast melting multiparticulate formulation (cf. D1: examples 1-9). Generally, in view of the teaching of D1-D5, the process of melt-coating and melt-granulation is a well-known practice in the field of taste masked multiparticulate formulations for oral administration. Application of hydrophobic coating material is known e.g. from D2, D3 and D5. Coating with hydrophilic compounds is disclosed in D1 and D4.

**WRITTEN OPINION OF THE
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None of the presently claimed features appears to bring a solution to any specific problem, as compared to the state of the art, which solution would involve an inventive step.

The subject-matter of claims 1-6, 8-22, 27-29, 33-36 and 40-45 is considered to be industrially applicable and accordingly meets the requirements of Art.33(4) PCT.